

Fire Suppression & Native Range Release

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**Fire modeling conducted by:
SYNERGY Resource Solutions Inc.**

&

**Special thanks to Kathy Kershaw
of the BLM Lower Snake River
District for her assistance.**

Biomass data indicative of fine fuel loading from a BLM study area east of Boise

	'96	'97	'98	'99	
	---- lbs/acre ----				
	1700	2222	2200	2245	1900
	1500	2447	1350	3377	4182
	300	250	463	30	83
Total	3500	4919	4013	5652	6255

Source; 2001 Idaho Emergency Use Exemption, Plateau for control of leafy spurge, annual brome and medusahead in range. Idaho Department of Agriculture

Fire Suppression & Native Range Release

- Study Plans & Results
- Fire Modeling – reducing fire risk.
- Native Range Release.
- Revegetation of *Bromus* infested areas.



Methods used for the following research results

- 20 GPA
- 11002 flat fan tips
- CO² back pack sprayer
- 34 psi
- Small plot research
10' x 50' w/ 3 reps



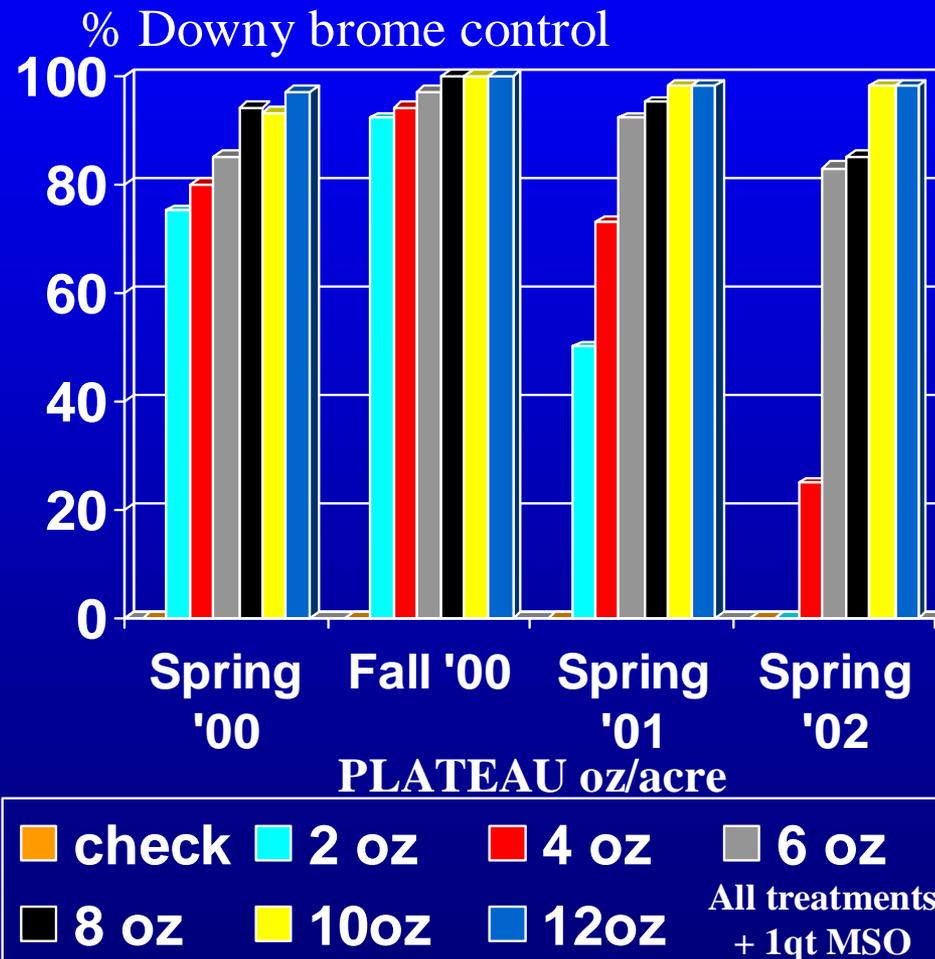
Release of desirable plants

- BLM, Boise area, Point Addendum
- Area had moderate leaf litter layer w/ some desirable species present.
 - 90% *B. tectorum*
 - 10% WY big sage, Rabbit brush, Bottlebrush squirreltail, & Sandberg's bluegrass
- Treatments applied:
 - November 3, 1999



Downy brome control

Release of desirable plants



- **Application:**
 - Nov 3, 1999
 - Pre-emergence to downy brome germination
- **Rating:**
 - Spring = May, 2000
 - Fall = Nov, 2000
 - Spring = April 2001
 - Spring = April 2002



Downy brome control

Release of desirable plants



Non-treated check



May 3, 2000
6 months after treatment
Plateau 8oz/acre + MSO



Downy brome control

Release of desirable plants



Fire Modeling Data Collection



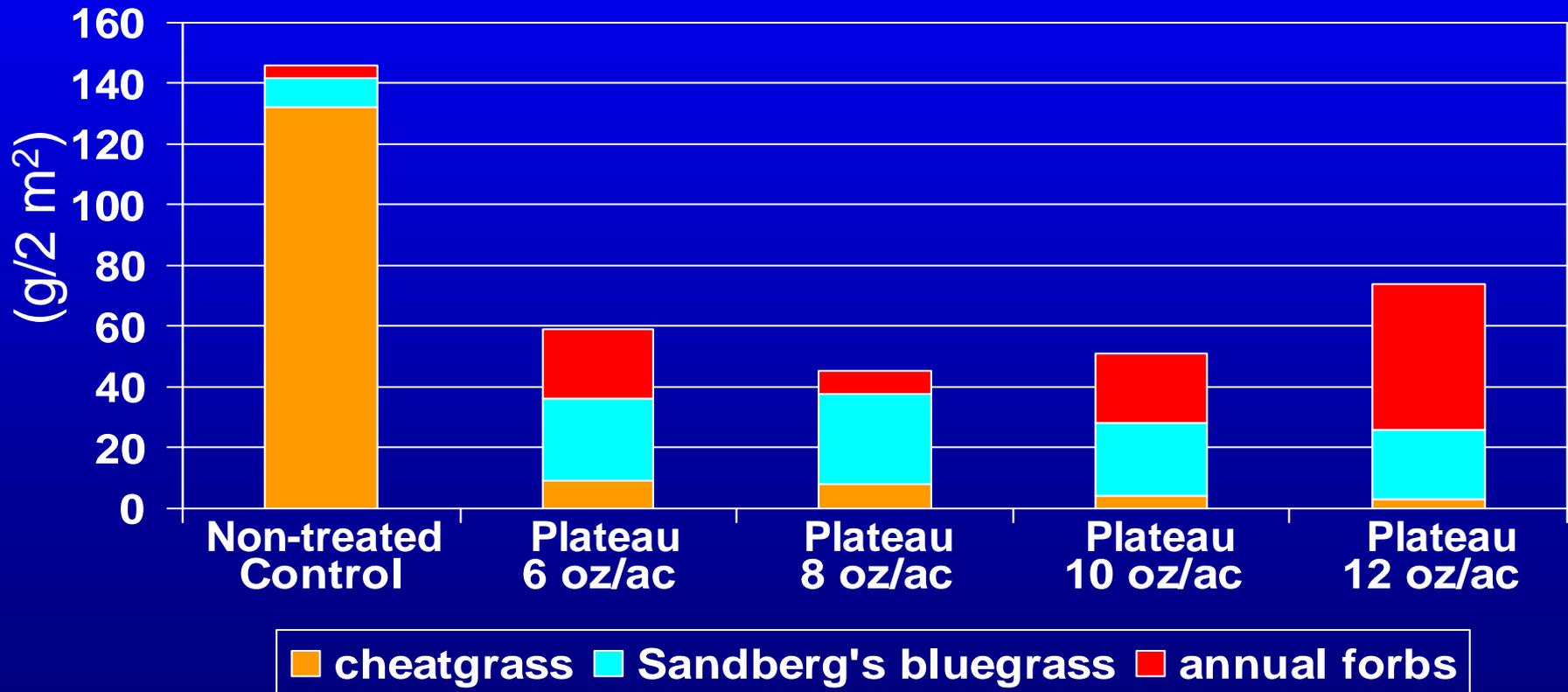
June 15, 2002 - 32 MAT

- plots were analyzed to determine fire behavior
- Data collected:
 - Biomass production
 - Litter accumulation
 - Plant height
 - Plant inter-space
- Data applied to:
BehavePlus Fire-Modeling Program

Fire Modeling – Live Biomass

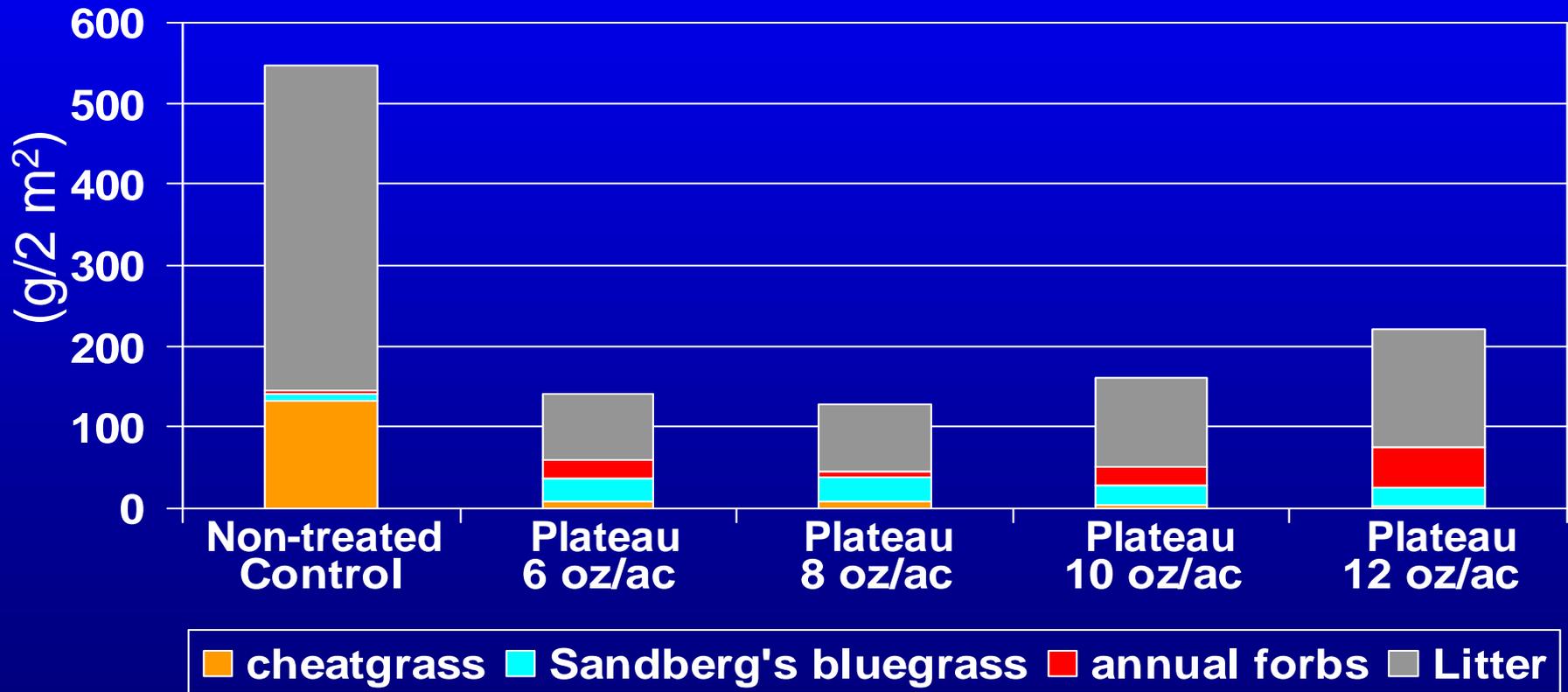
Dry year – Tallest cheatgrass was 6 inches

Plant sample weights (grams/2 meter²)



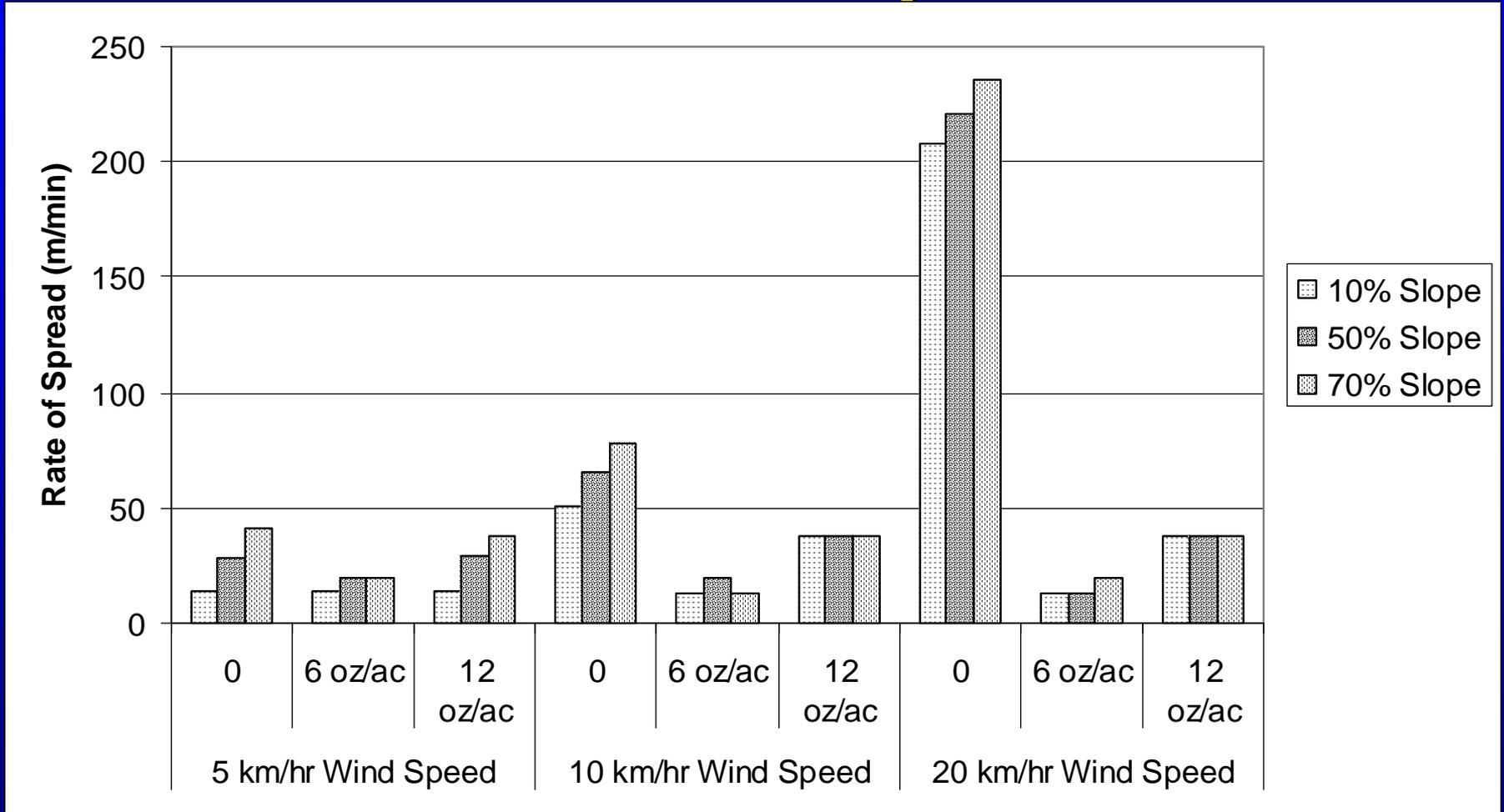
Fire Modeling – Biomass w/ Litter

Plant sample weights (grams/2 meter²)



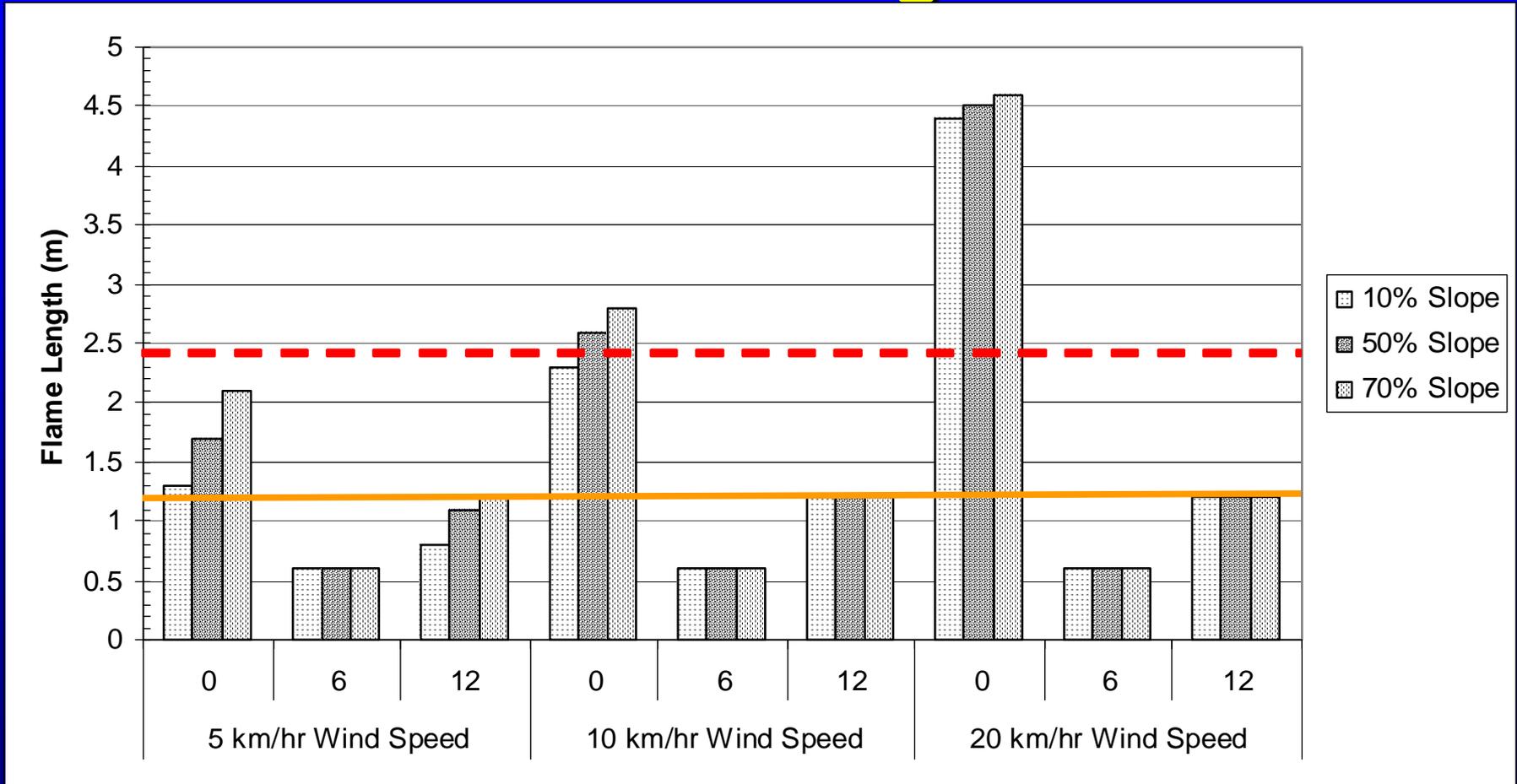
Fire Modeling

Rate of Fire Spread



Rate of spread (m/min) at three slopes and three wind speeds and 5% fine fuel moisture comparing Plateau application rates of 0, 6, and 12 oz/ac.

Fire Modeling Flame Length



- flame length of 1.2 m (hand control ceases to be effective).
- - - flame length of 2.4 m (the fire cannot be contained from the head fire).

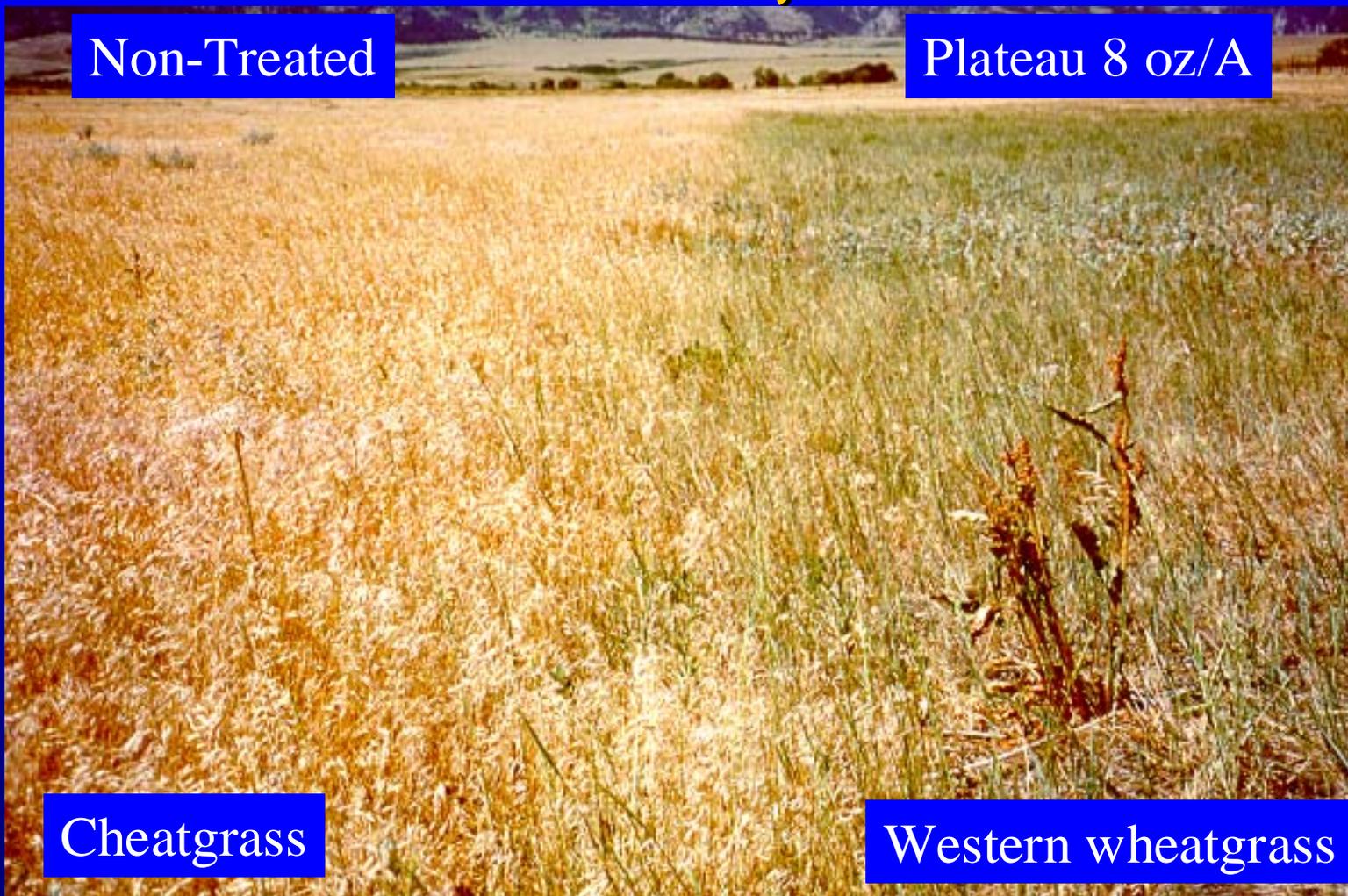
Native Range Release Sheridan, WY

Non-Treated

Plateau 8 oz/A

Cheatgrass

Western wheatgrass



GRASS ESTABLISHMENT

Boisie, ID BLM – Simco Road Site

- **Treated: 11/3/99**
- **Planted: 11/17/99**
- **Timing: Pre-Plant, Pre-emergence to burbuttercup and downy brome.**
- **Species Planted:**
 - **Bozoisky Russian Wildrye**
 - **Vavilov Siberian Wheatgrass**

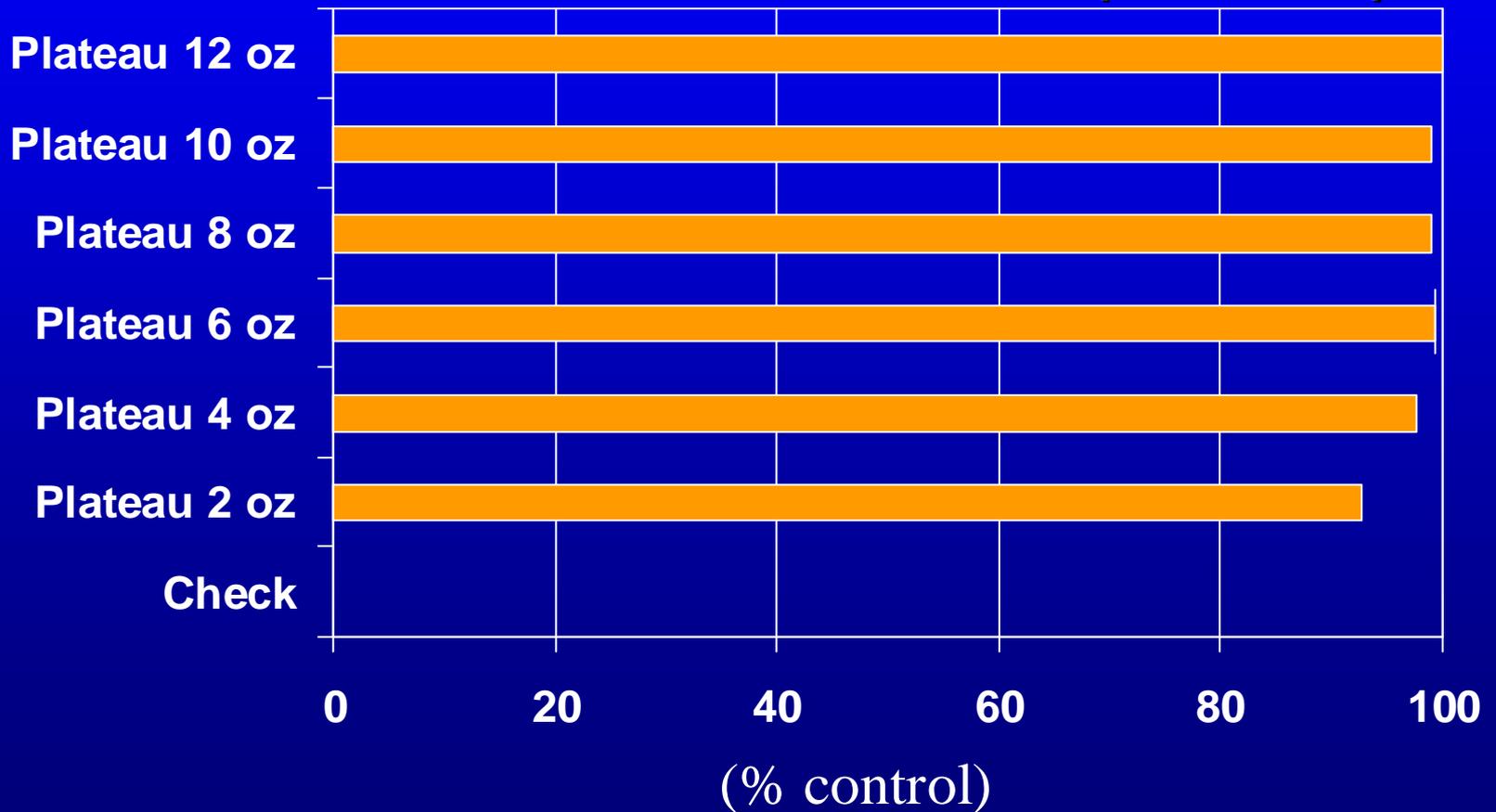


30 MAT Plateau applied after burn prior to planting of
wildrye and wheatgrass

DOWNY BROME - % CONTROL

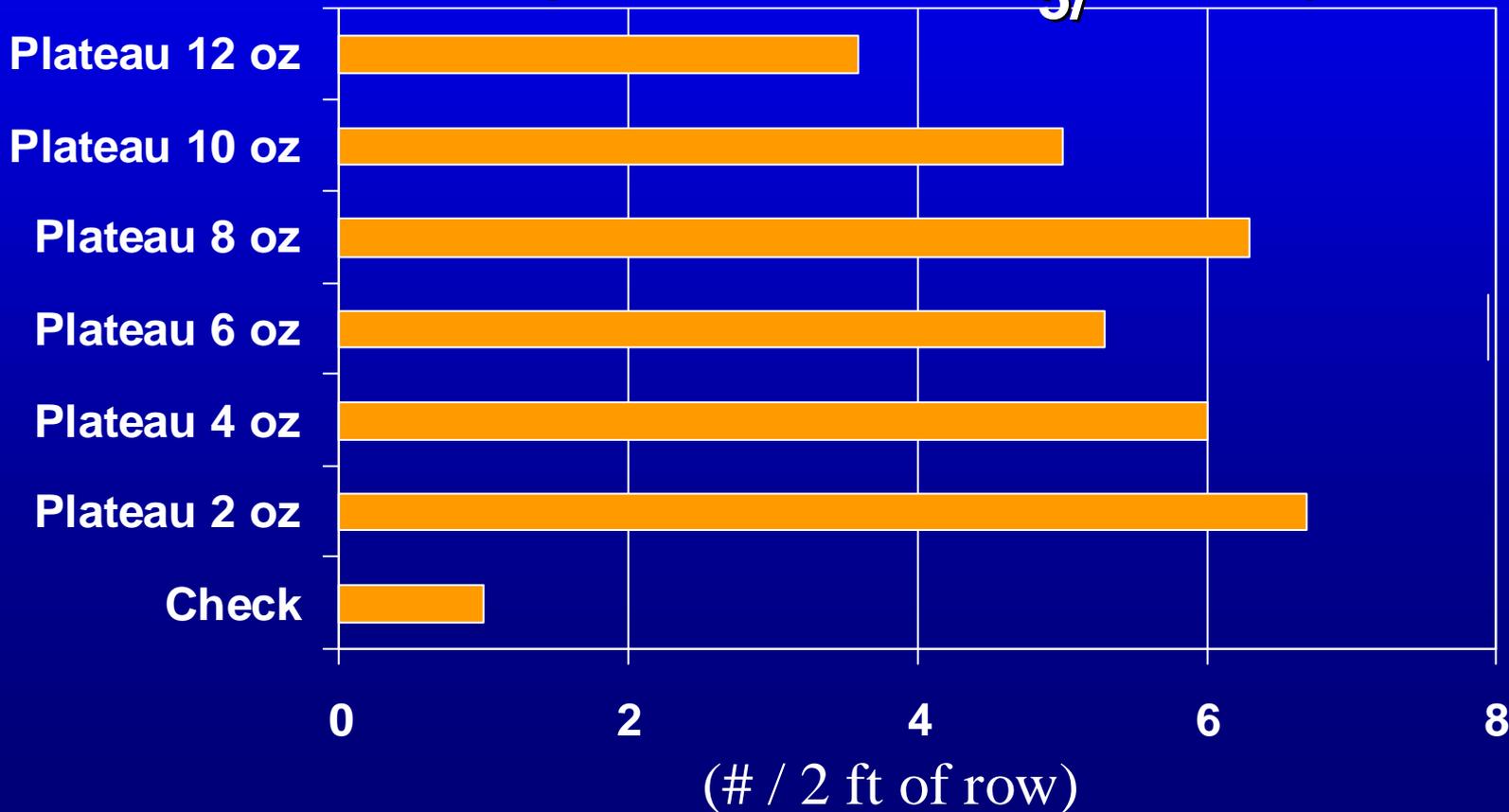
Boisie, ID – 30 MAT

5/21/02 (Pre-Plant)

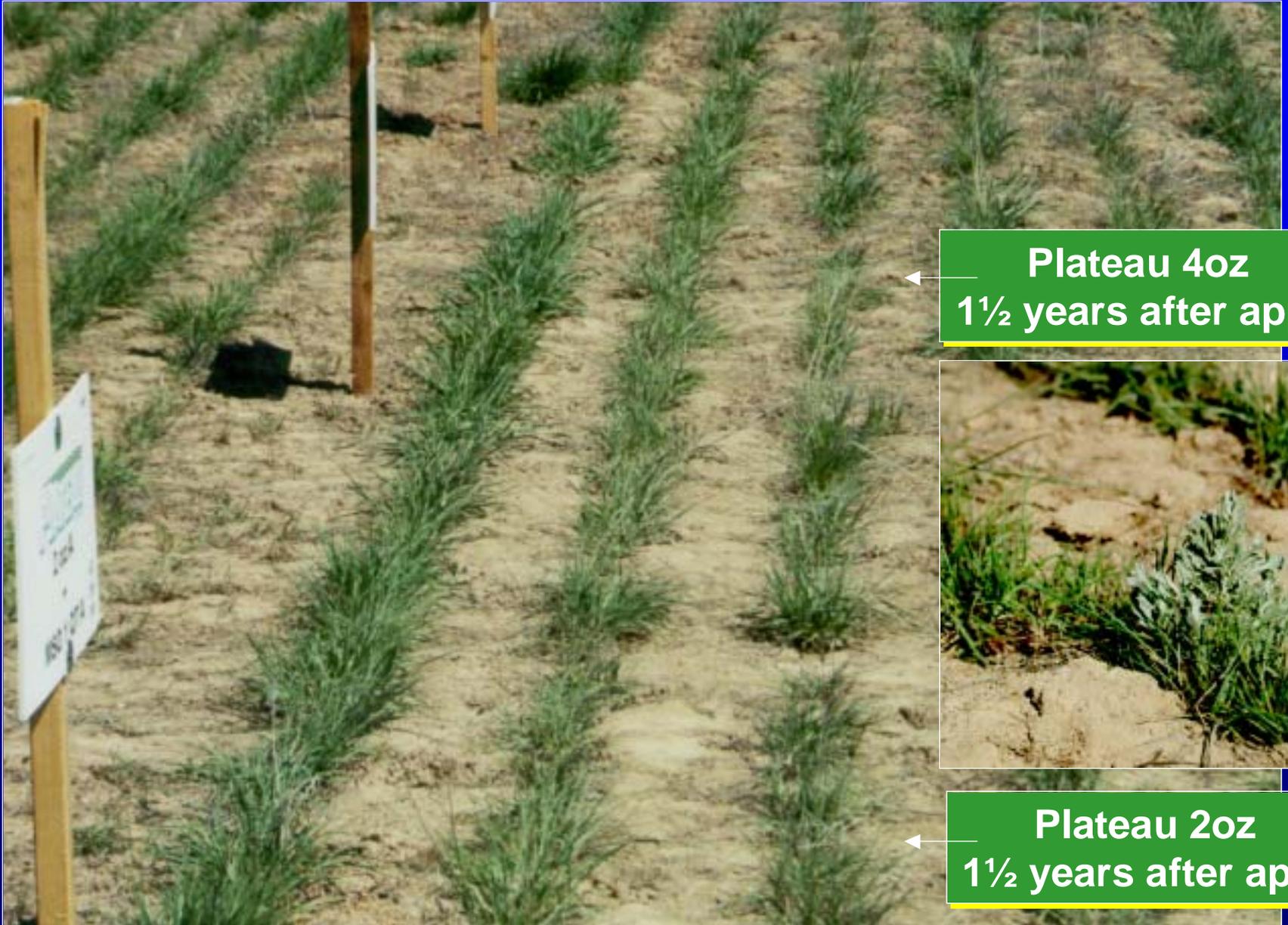


ESTABLISHMENT OF SIBERIAN WHEATGRASS & RUSSIAN WILD RYE - Boisie, ID – 30 MAT

of Plants per 2 foot of row ^{5/} 21/02 (Pre-Plant)



Revegetation after a burn



← Plateau 4oz
1½ years after appl.



← Plateau 2oz
1½ years after appl.

Wyoming can still be rescued!





Returning the Range



Conclusion 3 YAT

- **Treated areas had significantly less downy brome than non-treated area.**
- **Plateau at 6 oz/A or higher would effectively reduce *B. tectorum* in and around important habitat resources.**
- **Flame lengths would be reduced by 50 – 90% in the 6 oz rate of Plateau.**

Conclusion 3 YAT

- **Plateau plots had Lower Flame Heights & Rate of Spread than the non-treated plots.**
- **Hand Control of fire could have been used on fires in all Plateau plots but not in any of the Non-treated plots.**
- **Plateau can be used to establish desired vegetation.**

Conclusion 3 YAT

- **Plateau can be incorporated into land management plans, reducing the risk of loss of life, structures and vegetation in areas of concern by reducing fuel load.**

Conclusion

- Plateau is effective for control of annual *bromus spp.*
- Most rangeland grasses, forbs & shrubs are tolerant at these rates and timings.



Annual Brome Control



GAINING NEW GROUND.